ENVIRONMENTAL ASSESSMENT

AND

SECTION 404 EVALUATION

FOR

BEACH EROSION CONTROL

CLARK POINT BEACH

NEW BEDFORD, MASS.

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.

OCTOBER 1978

ERRATA

Please make the following corrections which reflect a modification to the project.

1. ENVIRONMENTAL ASSESSMENT

   Delete the following:

   P.2. - raising the inshore end of the existing northern groin.

   P.3. - reconstructing the inshore end of the Dudley Street groin to a higher elevation.

   P.3. - reconstruction, and

   P.7. - and raising the inshore end of the groin at Dudley Street.

2. SECTION 404 EVALUATION

   Delete:

   P.1. - raising the inshore end of the existing northern groin and

3. PLATE NO. 2 - ALTERNATE NO. 1

   Delete

   Raise inshore end of existing groin sandfill elevation EL 8.0 to EL 7.0

ENVIRONMENTAL ASSESSMENT

CLARK POINT BEACH EROSION PROJECT

NEW BEDFORD, MASSACHUSETTS

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASSACHUSETTS

October 1978

Summary of Considerations

Environmental considerations indicate minimal short-term disruption of the project area with a rapid return to productivity and no long-term adverse effects. Economic analysis indicates the project is justifiable. Completion of the project will result in an aesthetically pleasing recreational area that conforms with local land use plans.

The alternative "new groin plan" would have the same environmental impacts as the proposed plan. While this alternative is economically justifiable, the addition of three new groins would conflict with land use plans by substantially reducing beach recreational area.

The no action alternative would neither improve or reduce the quality of the environmental setting. It would allow continued deterioration of existing structures and conflict with land use plans.

Plans of Protection and Improvement

Rodney French Boulevard and West Beach - Groin Extension Plan

A plan for protection and improvement of approximately 1,600 feet of Rodney French Boulevard West Beach between the groin at Dudley Street and the ramp at Lucas Street has been developed. The plan consists of reconstructing the inshore end of the Dudley Street groin to a higher elevation, lengthening the two existing groins south of Dudley Street, and widening the beach by direct placement of sandfill. The fill would be placed generally to widen the beach above high water to a minimum width of 100 feet to provide protection against wave attack and additional beach area for recreational use. The groin reconstruction, and extensions would reduce losses of beach material. Widths of beach at the updrift side of groins would be dependent on the compartment capacity of the groins. Suitable material for beachfill from land borrow areas is available west and north of the harbor. Commercial sources are located in the town of Dartmouth about five miles to the west, and numerous undeveloped sources lie in that general area.

Project Setting Without the Project

Location and Description

Clark Point is located in the City of New Bedford, Bristol County, Massachusetts. New Bedford is located on the north shore of Buzzards Bay, an arm of the Atlantic Ocean, about 50 miles south of Boston and about 30 miles southeast of Providence, Rhode Island. The city has approximately 10 miles of shoreline. Clark Point, a

Project Location

Clark Point Beach is located in the City of New Bedford, Bristol County, Massachusetts, about 50 miles south of Boston and about 30 miles southeast of Providence, Rhode Island. See Plate 1.

Project Description

The proposed project will consist of the restoration of approximately 1,600 feet of public beach by widening the beach to a minimum width of 100 feet by the direct placement of suitable sandfill, raising the inshore end of the existing northern groin and lengthening the two remaining existing groins 250 and 85 feet respectively. This stretch of beach lies along Clark Cove which opens southerly into Buzzards Bay and runs from Dudley Street to the groin south of Lucas Street. A previous report "Clark Point, New Bedford, Mass., Beach Erosion Control Study," was prepared by the U. S. Army Corps of Engineers, NED, and published in September 1962. The report concluded that there appeared to be no significant natural source of beach material for nourishment by means of littoral transport. Therefore the stretch of beach, hereafter referred to as West Beach, must be artificially nourished to maintain a satisfactory profile. When compared to a plan of the same area completed in 1962, recent topographic surveys show that there have been no significant physical changes to West Beach.

peninsula with approximately 4 miles of shoreline is part of the city of New Bedford and extends southerly into Buzzards Bay. Clark Point Beach is situated along the west side of the Clark Point peninsula adjacent to Clark Cove and covers a stretch of beach approximately 1,600 feet long between Dudley Street and Lucas Street along Rodney French Boulevard West. All of the shore area under study is public property belonging to the City of New Bedford. Buildings along this stretch of beach include a handicapped children's camp located south of Dudley Street, and a municipal bathhouse with concrete pavilion. The bathhouse is adjacent to the children's camp. Other structures in the study project area include three groins placed at regular intervals along the beach, and a seawall along the inshore end of the beach, designed to protect Rodney French Boulevard West. A concrete ramp adjacent to the south side of the bathhouse slopes onto the beach from the top of the seawall. A similar concrete ramp can be found across from Lucas Street, the southernmost end of the Federal project area.

Relationship of Proposed Action to Land Use Plan

The extension of groins and placement of sandfill along Rodney French Boulevard West are in harmony with current local and state land use plans. This plan, jointly carried out, will enhance the project area by improving existing structures and enlarging the recreational area of the beach. This is a coordinated Federal, State, and local project to improve recreational beach bathing within the City of New Bedford.

PROBABLE IMPACTS

Groin Extension

All materials used to construct groin extensions will be supplied from an inland site, as yet unidentified, and transported overland by truck to the project site. Both Dartmouth and Freetown (Rochester), located 5 and 15 miles away respectively, have supplied construction materials in past actions of a similar nature.

Approximately 9,480 tons of stone will be needed for groin extensions. It is expected that construction vehicle traffic will result in increased noise levels, dust, potential spillage, and decrease aesthetics along the route travelled and in the immediate work areas along the beach. Compliance with contract specifications would minimize most of these impacts. The intensity of these impacts would be, for the most part, dependent upon the specific route travelled. Traffic congestion due to construction vehicles is not expected to pose any problems except possible minor delays along Rodney French Boulevard West.

Actual placement of stone for groin extension will destroy marine biota living on or near the ends of the existing groins. Recolonization should begin as soon as construction activity ceases. Some turbidity in the water column may also occur.

All impacts should be temporary, lasting only as long as construction is in progress.

After construction, the flat stone surface of the groins will provide fishermen with an ideal spot to fish. The main benefit of the

groins will be the compartmenting of the beach sandfill, resulting in substantial reduction of beach material lost due to erosion.

Beach Fill

Sand to be used for beach fill will also come from an inland site and hauled overland to the beach. The fill material will be leveled by bulldozers to a slope of 1 on 10 to 1 on 20. Temporary impacts related to this type of work could include increased noise levels, dust, potential spillage on roadways, minor traffic congestion along the beach, and decrease of aesthetics in the immediate area. These impacts can be controlled through compliance with contract specifications. Placement of sandfill will destroy the limited sessile biota inhabiting the beach, both above and below the tide line. Repopulation should commence as soon as project operations are completed. Some turbidity may also occur. Again, all impacts will exist only as long as construction work continues.

Alternatives

1. Addition of Three Groins

Protection and improvement of the stretch of beach between Dudley Street and the groin south of Valentine Street, approximately 1,600 feet in length, could be accomplished by reconstructing the inshore end of the Dudley Street groin to a higher elevation and constructing three additional groins, 350, 340, and 375 feet long, located as indicated on Plate 2. Beaches would then be widened to a minimum width of 100 feet to provide protection against wave attack and additional beach area for recreational use.

While this alternative is economically feasible, the addition of three new groins will substantially cut into beach recreational area.

This would not be compatible with the project purpose to improve beach bathing opportunity.

No Action

No action alternative would not be in line with the Corps policy of helping to protect the backshore from wave attack and maintain public beaches whenever feasible. This alternative will allow further deterioration of existing structures and continued erosion of beaches. No action would also conflict with current land use plans of the City of New Bedford and the Commonwealth of Massachusetts.

Relationship Between Short-Term Uses and Long-Term Enhancement and Productivity

Past experience has shown the placement of sandfill on the beaches of Clark Cove to be a temporary measure of improvement. By increasing the length of the existing groins and raising the inshore end of the groin at Dudley Street greater protection against erosion for the beaches involved should be provided. Loss of sandfill material from the beaches will still occur, but the rate of loss should decrease significantly. Therefore, the short-term uses and long-term productivity goals of the proposed project are compatible.

Irreversible and Irretrievable Commitment of Resources

All labor, capital, and material used for groin construction and beachfill represent irretrievable resource commitments. Any organisms displaced or destroyed during project activities would also constitute an irretrievable commitment of resources. However, repopulation should commence as soon as the project is complete.

HISTORICAL - ARCHAEOLOGICAL FEATURES

An examination of this project by the Corps archaeologist and subsequent coordination with staff at the Massachusetts Historical Commission has determined that the project will have no effect upon significant cultural resources, as past erosion would have heavily disturbed any cultural resources which may have been present.

CONCLUSIONS

Based on my review of the relevant facts, and in consideration of the general public need, I find that the project should proceed as scheduled. In my evaluation, the following points were considered pertinent:

(a) Environmental considerations indicate that there will be a minimum amount of short-term, localized damage to marine organisms, but there will be no permanent, long-term adverse effects. Because the material to be used is clean sand, no adverse effects will be associated with its placement on the beaches.

(b) The completion of this project will restore and enhance recreational swimming activity in a portion of the city which has very limited outdoor recreational opportunities.

(c) The newly created enlarged beach resulting from the proposed project will be aesthetically more pleasing than the existing beach and will help relieve extreme crowding conditions as are present on the eroded beach during summer recreational months.

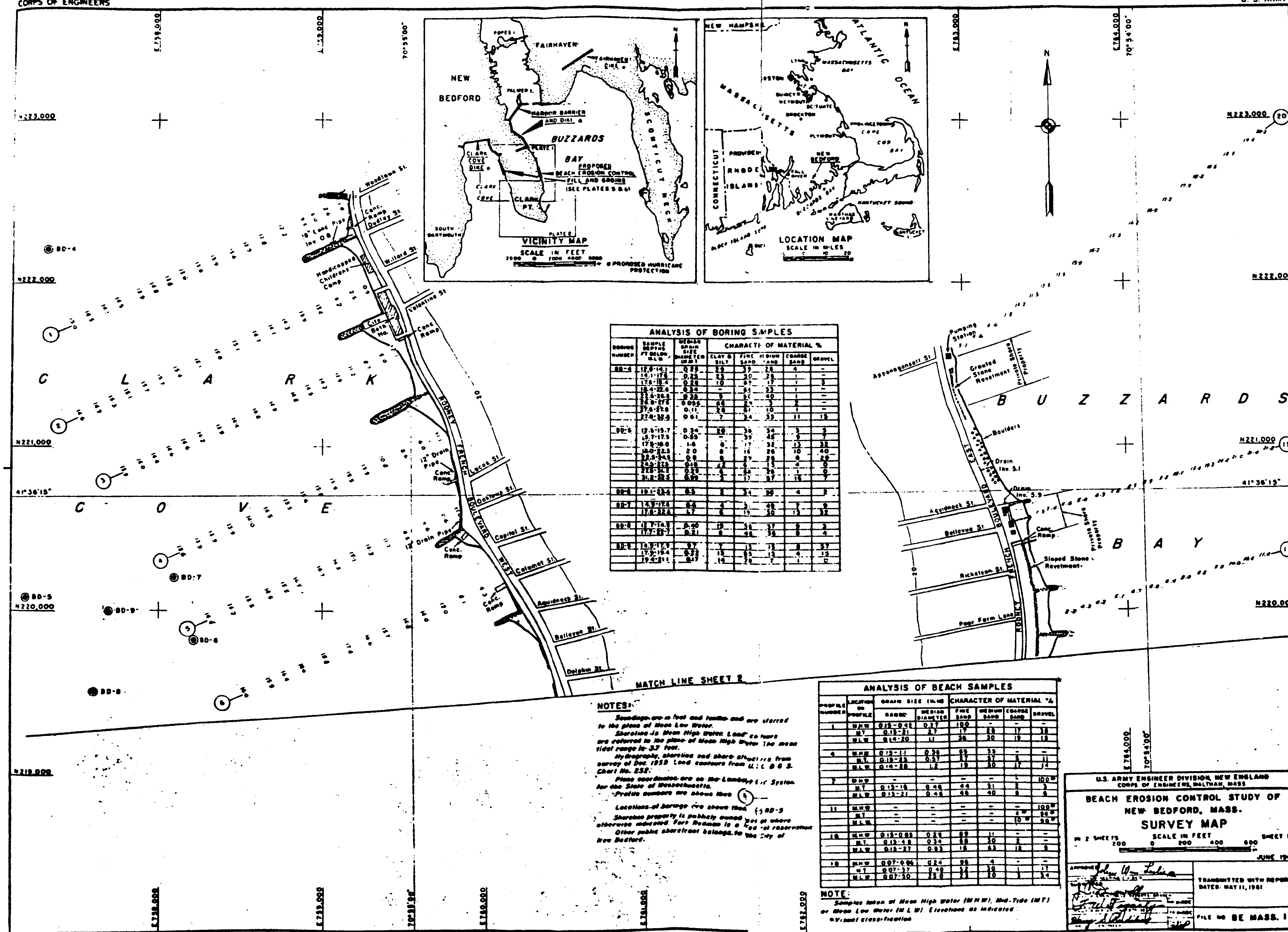
(d) This Assessment has been prepared in accordance with the National Environmental Policy Act of 1969 and will be coordinated with appropriate regulatory agencies.

(e) Based on the scheduling of the actual work, the project can be accomplished with minimal adverse environmental impacts. This Assessment therefore replaces the need for a formal Environmental Impact Statement.

20 October 1978
(Date)

JOHN P. CHANDLER
Colonel, Corps of Engineers
Division Engineer

CORPS OF ENGINEERS | U. S. ARMY



ANALYSIS OF BORING SAMPLES

Boring Number	Sample Depths Ft Below M.L.W.	Median Grain Size Diameter (mm)	Character of Material %: Clay & Silt	Fine Sand	Medium Sand	Coarse Sand	Gravel
BD-4	12.6-14.1	0.25	29	39	28	4	-
	14.1-17.6	0.25	23	50	26	1	-
	17.6-18.4	0.28	10	69	17	1	3
	18.4-22.6	0.34	-	64	33	1	-
	22.6-26.0	0.32	9	50	40	1	-
	26.0-27.6	0.035	66	29	3	2	-
	27.6-27.8	0.11	28	61	10	1	-
	27.8-32.4	0.61	7	34	33	11	15
BD-5	12.6-15.7	0.34	20	38	34	3	5
	15.7-17.5	0.55	-	39	45	9	7
	17.5-18.0	1.6	6	17	32	13	32
	18.0-22.5	2.0	8	16	26	10	40
	22.5-24.5	0.8	8	27	28	8	29
	24.5-27.5	0.18	42	6	15	4	0
	27.5-31.2	0.29	6	64	28	1	0
	31.2-33.5	0.99	5	17	37	16	7
BD-6	19.1-23.6	0.5	2	34	58	4	2
BD-7	14.5-17.6	0.4	4	[illegible]	48	7	9
	17.6-22.6	1.7	6	19	30	13	32
BD-8	12.7-14.5	0.40	15	36	37	8	3
	17.7-23.7	0.21	8	46	36	8	4
BD-9	14.5-17.9	2.7	7	13	15	8	57
	17.9-19.4	0.22	15	65	13	4	13
	19.4-21.1	0.17	14	78	7	1	0

NOTES:

Soundings are in feet and tenths and are referred to the plane of Mean Low Water.

Shoreline is Mean High Water. Land contours are referred to the plane of Mean High Water. The mean tidal range is 3.7 feet.

Hydrography, shoreline and shore structures from survey of Dec. 1959. Land contours from U.S.C. & G.S. Chart No. 252.

Plane coordinates are on the Lambert Grid System for the State of Massachusetts.

Profile numbers are shown thus (4)

Locations of borings are shown thus (•) BD-5

Shorefront property is publicly owned except where otherwise indicated. Fort Rodman is a Federal reservation. Other public shorefront belongs to the City of New Bedford.

ANALYSIS OF BEACH SAMPLES

Profile Number	Location on Profile	Grain Size (mm): Range	Median Diameter	Character of Material %: Fine Sand	Medium Sand	Coarse Sand	Gravel
1	M.H.W.	0.15-0.42	0.27	100	-	-	-
	M.T.	0.15-21	2.7	17	28	17	38
	M.L.W.	0.14-20	1.1	35	30	19	18
4	M.H.W.	0.15-1.1	0.28	65	33	-	-
	M.T.	0.15-23	0.57	27	37	5	11
	M.L.W.	0.14-28	1.2	19	30	17	14
7	M.H.W.	-	-	-	-	-	100*
	M.T.	0.13-19	0.46	44	31	3	3
	M.L.W.	0.13-21	0.46	46	40	8	6
11	M.H.W.	-	-	-	-	-	100*
	M.T.	-	-	-	-	4*	96*
	M.L.W.	-	-	-	-	10*	90*
18	M.H.W.	0.15-0.83	0.29	89	11	-	-
	M.T.	0.13-4.8	0.34	68	30	2	-
	M.L.W.	0.15-27	0.83	16	63	12	9
19	M.H.W.	0.07-0.86	0.24	96	4	-	-
	M.T.	0.07-37	0.40	32	30	1	17
	M.L.W.	0.07-30	2.50	23	20	3	24

NOTE:
Samples taken at Mean High Water (M.H.W.), Mid-Tide (M.T.) or Mean Low Water (M.L.W.). Elevations as indicated.
* Visual classification

U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.

BEACH EROSION CONTROL STUDY OF NEW BEDFORD, MASS.

SURVEY MAP

IN 2 SHEETS — SCALE IN FEET 200 0 200 400 600 — SHEET 1

JUNE 1960

APPROVED: [signatures]

TRANSMITTED WITH REPORT DATED: MAY 11, 1961

FILE NO BE MASS. 17

PLATE NO. 1

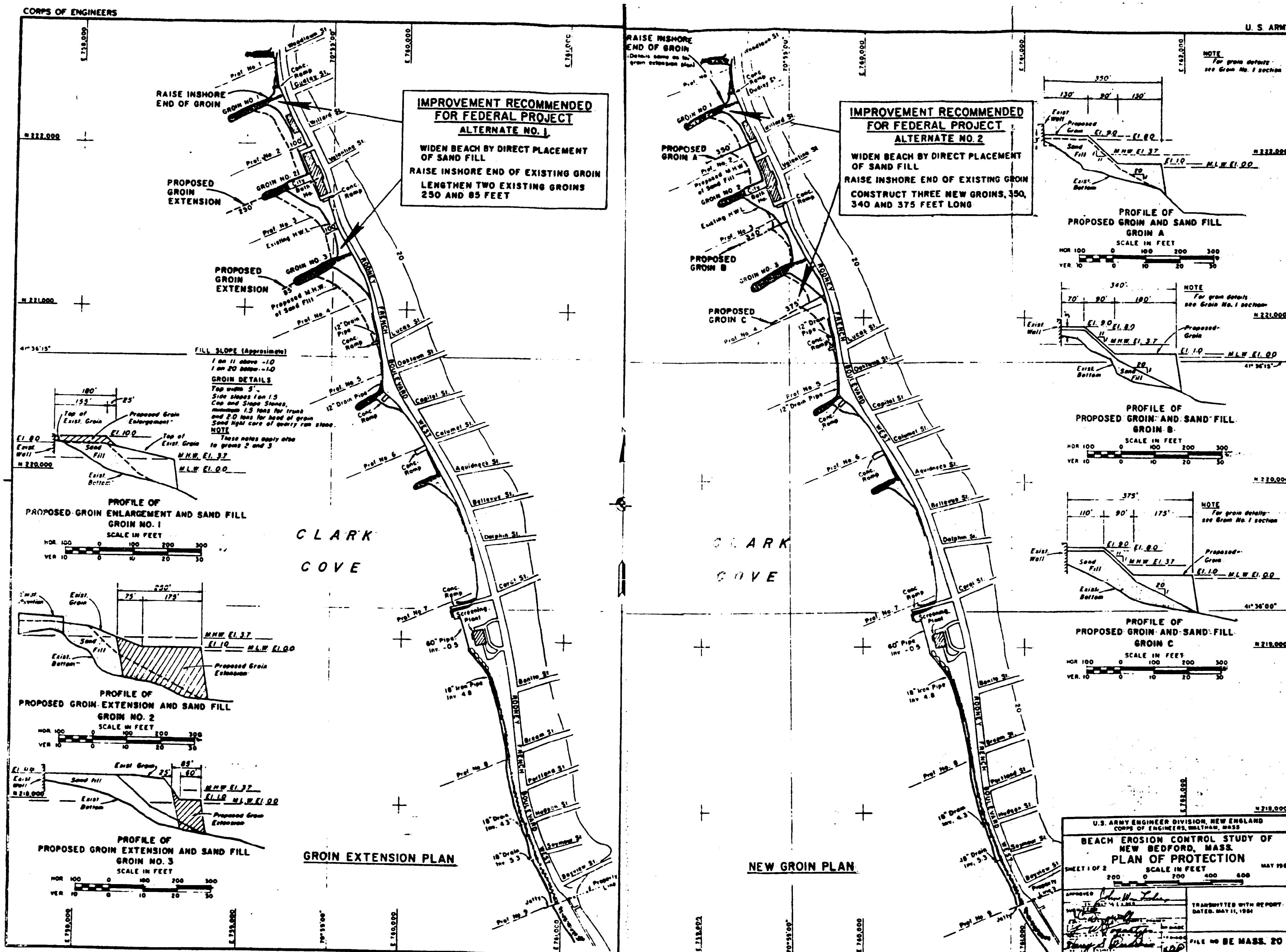

CORPS OF ENGINEERS
U. S. ARMY
IMPROVEMENT RECOMMENDED FOR FEDERAL PROJECT
ALTERNATE NO. 1
WIDEN BEACH BY DIRECT PLACEMENT OF SAND FILL
RAISE INSHORE END OF EXISTING GROIN
LENGTHEN TWO EXISTING GROINS 250 AND 85 FEET
RAISE INSHORE END OF GROIN
PROPOSED GROIN EXTENSION
PROPOSED GROIN EXTENSION
FILL SLOPE (Approximate)
GROIN DETAILS
PROFILE OF PROPOSED GROIN ENLARGEMENT AND SAND FILL GROIN NO. 1
SCALE IN FEET
PROFILE OF PROPOSED GROIN EXTENSION AND SAND FILL GROIN NO. 2
SCALE IN FEET
PROFILE OF PROPOSED GROIN EXTENSION AND SAND FILL GROIN NO. 3
SCALE IN FEET
CLARK COVE
RODNEY FRENCH BOULEVARD WEST
GROIN EXTENSION PLAN
IMPROVEMENT RECOMMENDED FOR FEDERAL PROJECT
ALTERNATE NO. 2
WIDEN BEACH BY DIRECT PLACEMENT OF SAND FILL
RAISE INSHORE END OF EXISTING GROIN
CONSTRUCT THREE NEW GROINS, 350, 340 AND 375 FEET LONG
RAISE INSHORE END OF GROIN
PROPOSED GROIN A
PROPOSED GROIN B
PROPOSED GROIN C
PROFILE OF PROPOSED GROIN AND SAND FILL GROIN A
PROFILE OF PROPOSED GROIN AND SAND FILL GROIN B
PROFILE OF PROPOSED GROIN AND SAND FILL GROIN C
SCALE IN FEET
NEW GROIN PLAN
U.S. ARMY ENGINEER DIVISION, NEW ENGLAND
CORPS OF ENGINEERS, WALTHAM, MASS.
BEACH EROSION CONTROL STUDY OF NEW BEDFORD, MASS.
PLAN OF PROTECTION
SHEET 1 OF 2
SCALE IN FEET
MAY 1961
TRANSMITTED WITH REPORT DATED: MAY 11, 1961
FILE NO BE MASS. 20

PLATE NO. 2

SECTION 404 EVALUATION

FOR

BEACH EROSION CONTROL

CLARK POINT

NEW BEDFORD, MASSACHUSETTS

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASSACHUSETTS

Section 404 Evaluation Report
for
Beach Erosion Control
Clark Point
New Bedford, Massachusetts

1. References

a. Section 404(b) of Public Law 92-500, Federal Water Pollution Control Act Amentments of 1972 as enacted on 18 October 1972.

b. 40 CFR 230.4-230.5 dated 5 September 1975.

c. ER 1105-2-XXX Corps of Engineers Draft Regulations dated 1 October 1977.

d. DMRP Miscellaneous Paper D-76-17 Environmental Effects Laboratory, U.S. Army Engineer Waterways Experiment Station, May 1976. Final Report.

e. Rules and Regulations for the Establishment of Minimum Water Quality Standards and for the Protection of the Quality and Value of Water Resources, Commonwealth of Massachusetts, Water Resources Commission, Division of Water Pollution Control, booklet published 13 May 197-.

2. The Proposed Plan

The proposed project will consist of the restoration of approximately 1600 ft. of public beach by widening the beach to a minimum width of 100 ft. by the direct placement of suitable sandfill, raising the inshore end of the existing northern groin and lengthening the two remaining existing groins 250 and 85 feet respectively. This stretch of beach lies along Clark Cove which opens southerly into Buzzards Bay and runs from Dudley Street to the groin south of Lucas Street.

3. Project Authorization and Status

The development of a beach erosion control project in New Bedford, Massachusetts, was authorized under the 1962 River and Harbor Act, Public Law 87-874, as amended.

An Environmental Assessment has been prepared. The assessment, along with this 404 Evaluation, will accompany a revised project report of plans and specifications for project construction, all of which will be forwarded to the Office of Chief of Engineers in Washington, D.C., for final approval.

A previous report, "Clark Point, New Bedford, Massachusetts, Beach Erosion Control Study," was prepared by the U.S. Army Corps of Engineers, NED, and published in September 1962. The report concluded that there appeared to be no significant natural source of beach material for nourishment by means of littoral transport. Therefore, this stretch of beach must be artificially nourished to maintain a satisfactory profile.

4. Environmental Concerns

In view of the fact that the project is to control beach erosion which in turn will enhance aesthetic, recreational and economic values without irreparable damage to the surrounding environment, the project is considered a minor action and an Environmental Assessment has been prepared in lieu of an Environmental Impact Statement.

The project files and Federal regulations were reviewed to properly evaluate the objectives of Section 404 of Public Law 92-500. Based on this review, a public notice is necessary. The public notice will focus on the element of the project which involves the discharge of fill materials into the waters of the United States. Public views will be solicited and incorporated where applicable.

5. Determinations and Findings

(a) Alternatives to the selected plan have been considered and none that are practicable will have less adverse impacts on the aquatic and semi-aquatic ecosystem.

(b) No unacceptable environmental impacts on the aquatic and semi-aquatic ecosystem will occur as a result of fill activities.

(c) The placement of fill material will be accomplished under conditions which will minimize adverse environmental effects on the aquatic and semi-aquatic ecosystem.

Findings

(a) The discharge site for the Clark Point project has been specified through the application of the Section 404 (b) Guidelines.

6. Technical Evaluation

A technical evaluation with regard to environmental impacts will be considered in the following section. A point by point analysis

addressing the concerns of 40 CFR 230.4 - 230.5 under two major categories.

(i) Physical and chemical-biological interactive effects.

(ii) Selection of disposal sites and conditioning of discharges of dredged or fill material.

The project files and Federal regulations were reviewed to properly evaluate the objectives of Section 404 of Public Law 92-500. Based on this review, a public notice is necessary. The public notice will focus on the element of the project which involves the discharge of fill material adjacent to navigable waters of the United States. Public views will be solicited and incorporated, when applicable.

Analysis of the following tables can be interpreted best by concurrent examination of or an adequate familiarity with the EPA Guidelines (FRL 421-1, Section 230.4, and 230.5) as the remarks given herein are intended to answer questions specified in these sections.

20 October 1978

DATE

JOHN P. CHANDLER
Colonel, Corps of Engineers
Division Engineer

C. Procedure for Comparison of Sites

(1) Not applicable. All fill material will be obtained from a clean commercial source.

(2) Analysis of biological communities is deemed unnecessary as fill material matches existing materials. Repopulation by a benthic community similar in structure to the existing community should occur.

230.4-2 Water Quality Considerations

All fill material to be used during beach restoration will be clean.

230.5 Selection of Disposal Sites and Conditioning of Discharges of Dredged or Fill Material (a through e).

(a) General Considerations and Objectives (1-8)

(1) There will be no significant disruption of the chemical physical or biological integrity of the aquatic ecosystem.

(2) There will be no significant disruption to the food chain.

(3) Inhibition of faunal movement into and out of feeding, spawning, breeding or nursery areas will be minimal.

(4) Not applicable. There are no wetlands in or near the project area having a significant function in maintenance of water quality.

(5) Not applicable. Areas functioning in retention of naturally high or flood waters are not found in or near the project area.

(6) Turbidity will be kept to the lowest levels possible during construction activities.

(7) Completion of the project will increase aesthetic, recreational and economic values at the project site.

(8) Degradation of water value will be avoided through application of 230.4, 230.5 (c) and (d).

Technical Evaluation
Clark Point Beach Erosion Control
New Bedford, Massachusetts

230.4-1 Physical and Chemical - Biological Interactive Effects and Approaches for Evaluation

A. Physical Effects

(1) Wetlands - Not Applicable. There are no wetlands located in or near the immediate project area.

(2) Effects on the Water Column - Construction activities will cause temporary impacts on the water column. Increased turbidity and reduction of aesthetic appeal will persist until construction is completed.

(3) Effects on Benthos - Any benthos inhabiting the beach area will be covered over during project construction. Benthos populating the ends of the existing groins will also be destroyed when groins are lengthened. Repopulation by the same communities should commence as soon as construction is completed.

B. Chemical - Biological Interactive Effects

(1) Dredged or Fill Material Effects

(a) The fill materials consist of sand with particle size compatible with material already present and larger stone to be used in groin lengthening.

(b) All fill material will be obtained from a clean commercial source.

(c) The project is designed to insure minimal movement of fill material away from the beaches.

(2) Water Column Effects - Temporary decrease in light penetration will occur as a result of project activities. No elutriate test will be performed on bottom sediments which are composed of sand and shell fragments.

(3) Effects on Benthos - Not applicable. All fill material will be clean.

230.5 (Continued)

(5) Recreational Activities

(i) Increase in amount and duration of turbidity will be temporary and should not result in reducing the numbers or diversity of fish or cause a significant aesthetically displeasing change in color, taste or odor of the water.

(ii) Not applicable. All fill material will be clean.

(iii) Not applicable. Fill material will be free of pathogens.

(iv) Not applicable. Fill material will not contain oil or grease in harmful quantities.

(6) Threatened and Endangered Species

The project will not jeopardize the continued existence of any threatened or endangered species or destroy or modify the habitat of those species.

(7) Benthic Life

Project activities should not adversely effect or enhance the benthic community or its habitat.

(8) Wetlands

Not applicable. There are no wetlands in or near the project area.

(9) Submersed Vegetation

Not applicable. There are no areas of significant submersed vegetation in or near the project area.

(10) Size of Disposal Site

The project area is approximately 1600 feet in length. It is expected that project activities will have only temporary minor impacts on surrounding water resources, water quality and biota in the existing envirnnmental system.

230.5 (Continued)

(b) Considerations Relating to Degradation of Water Uses at Proposed Disposal Sites (1-10)

(1) Municipal Water Supply Intakes

There are no public water supply intakes in the proximity of the project area.

(2) Shellfish

(i) There are significant concentrated shellfish production areas in the project area.

(ii) All fill material will be clean. The groin lengthening is designed to reduce movement of fill material.

(iii) There will be no changes in current patterns, salinity patterns or flushing rates that would adversely affect shellfish.

(iv) Project activities will not significantly interfere with reproductive processes or cause undue stress to juvenile forms of shellfish.

(3) Fisheries

(i) There will be no significant disruption to fish spawning or nursery areas.

(ii) There will be minimal interference to fish spawning cycles or migration patterns and routes.

(iii) There is no significant submersed or emergent vegetation in the project area.

(4) Wildlife

Impacts on wildlife habitat, the food chain and community structures or marine and aquatic sanctuaries will be minimal.

230.5 (Continued)

(c) Other Considerations in Determining the Site and Disposal Conditions (1-7)

(1) The State of Massachusetts, Division of Water Pollution Control has determined the present classification of Clark Cove to be S.C. The area is suitable for recreational boating, aesthetic enjoyment and as habitat for wildlife and common food and game fishes.

(2) Not applicable. No open water disposal will occur during the project.

(3) Fill material will compliment the existing physical characteristics of the area.

(4) Not applicable. No open water disposal will occur during the project.

(5) Not applicable. All fill material will be clean.

(6) Not applicable. Confined areas will not be used for disposal of dredged or fill material.

(7) Because of the project nature (beach restoration) it is felt that a monitoring program is not warranted.

(d) Contaminated Fill Material Restrictions

Not applicable. All fill material will be obtained from a clean commercial source.

(e) Mixing Zone Determination

Not applicable. There is no disposal of dredge material associated with the project.